National Children's Study Waukesha County Vanguard Center

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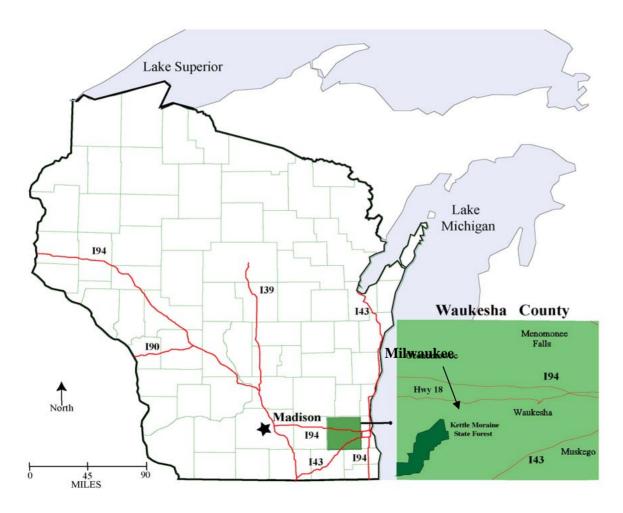
NCS Assembly Meeting Washington D.C. 11/29/05

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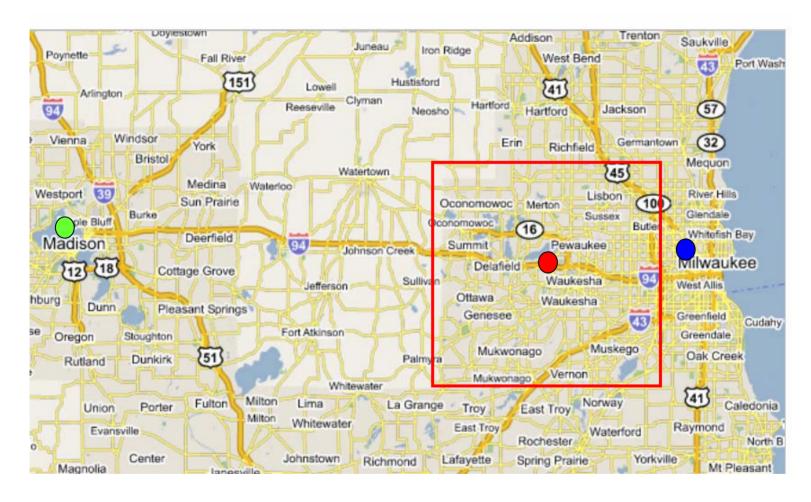
Waukesha County, Wisconsin:

Located in the Milwaukee – Waukesha – West Allis, Wisconsin MSA; a metropolitan, non-certainty NCS Vanguard site





Waukesha County, University of Wisconsin Madison, Medical College of Wisconsin/Children's Research Institute



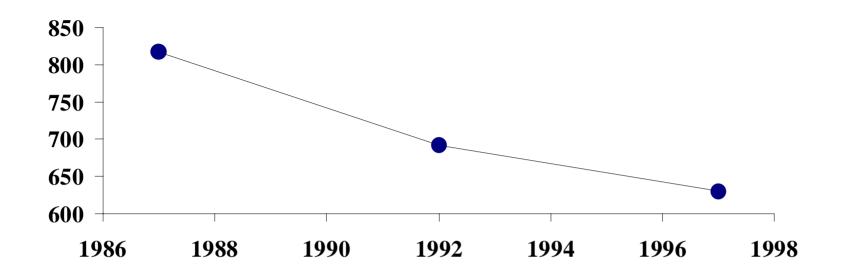
Map downloaded from MapQuest.

UW-Madison 65 MilesWaukesha County

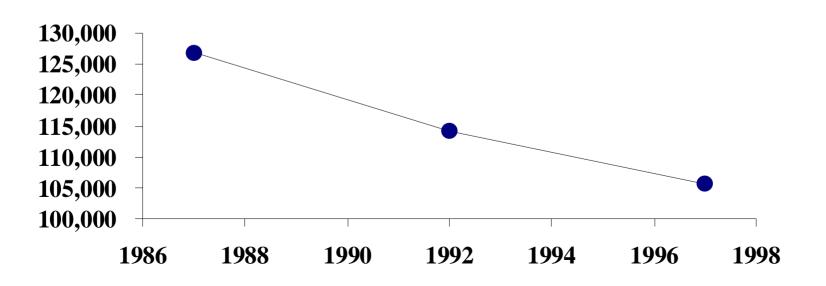




Number of Farms in Waukesha County 1987-1997

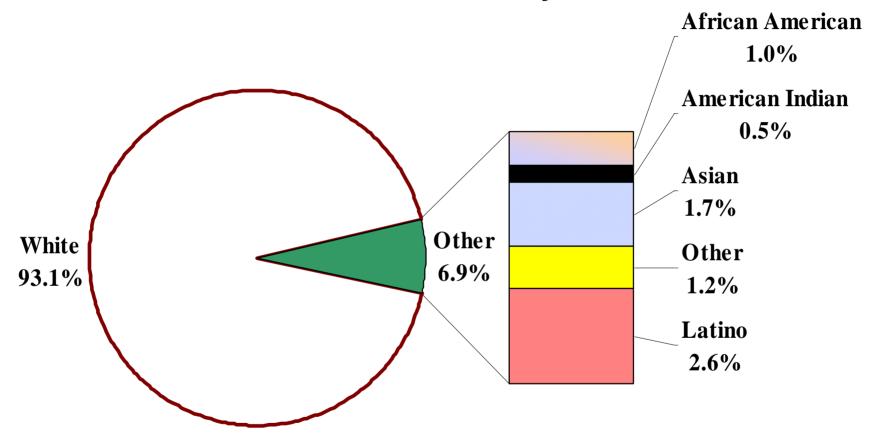


Acres of Farmland In Waukesha County 1987 to 1997





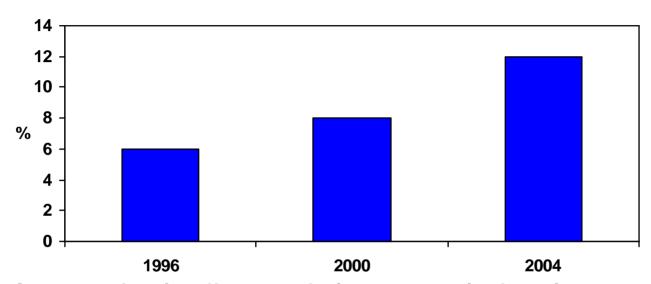
Racial / Ethnic Distribution in Waukesha County





Other Facts about Waukesha County Births





- ▶ Increasingly diverse infant population-largest increase is in Hispanic and Asian births.
- ▶ 23% of births are to women >=35



Vanguard Center Demographic Comparisons

| | Midwest | | | South | East | | West | | | |
|----------------------------|----------------|---------------|-----------------|--------------------------|-----------------|--------------|--------------|-------------------|--------------|-----------------|
| | Waukesha WI | Lincoln MN | Pipestone MN | Yellow Medicine MN | Brookings SD | Duplin NC | Queens NY | Montgo mery PA | Orange CA | Salt Lake UT |
| | | | | | | | | | | |
| Population 2000 | 360,767 | 6,429 | 9,895 | 11,080 | 28,220 | 49,063 | 2,229,379 | 750,097 | 2,846,289 | 898,387 |
| % change 90-00 | 18.4 | -6.7 | -5.7 | -5.2 | 12 | 22.7 | 14.2 | 10.6 | 18.1 | 23.8 |
| Persons per sq mile | 649 | 12 | 21 | 15 | 35 | 60 | 20,409 | 1,553 | 3,606 | 1,218 |
| Median Income | \$62,800 | \$31,607 | \$31,909 | \$34,393 | \$35,343 | \$29,900 | \$42,400 | \$60,800 | \$58,800 | \$48,400 |
| White, Non-Hispanic | 93% | 94% | 96% | 95% | 96% | 55% | 33% | 85% | 51% | 81% |
| | | | | | | | | | | |
| Live births | 4,311 | 75 | 106 | 131 | 309 | 728 | 32,268 | 9,376 | 45,366 | 18,223 |
| Births/1,000 population | 11.6 | 12.2 | 10.9 | 12.3 | 10.9 | 14.8 | 14.5 | 12.2 | 15.1 | 19.4 |
| Infant Mortality | 3.5 | 15.1 | 11.8 | 14.1 | 0 | 9 | 5 | 4.8 | 4.5 | 5.6 |
| Low birth weight (%) | 5.7 | 6.8 | 2.9 | 8.5 | 5.2 | 8.8 | 7.7 | 7.3 | 6.1 | 7.0 |
| Early Prenatal Care | 96% | 77% | 92% | 86% | 86% | 80% | 66% | 89% | 91% | 76% |



Environmental Exposures, Waukesha County

- Maternal smoking (10% according to maternal reporting between 1996 and 2000)
- High levels of and intra-county variability in radium and arsenic, trihalomethanes, and nitrates in the water supply
- Radon (a high percentage of the homes in Waukesha County have radon levels above the US EPA guideline)
- Lead (nearly 20% of existing households in Waukesha built before 1950)
- Expansion of housing, 25% of the housing structures in the county in 2000 constructed after 1990.
- Widespread agricultural pesticide exposures
- Outdoor air pollution -Air quality cancer risk, hazard index and fine particulate matter highest within the State of Wisconsin

Park in the City of Waukesha



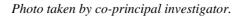






Photo taken by co-principal investigator.

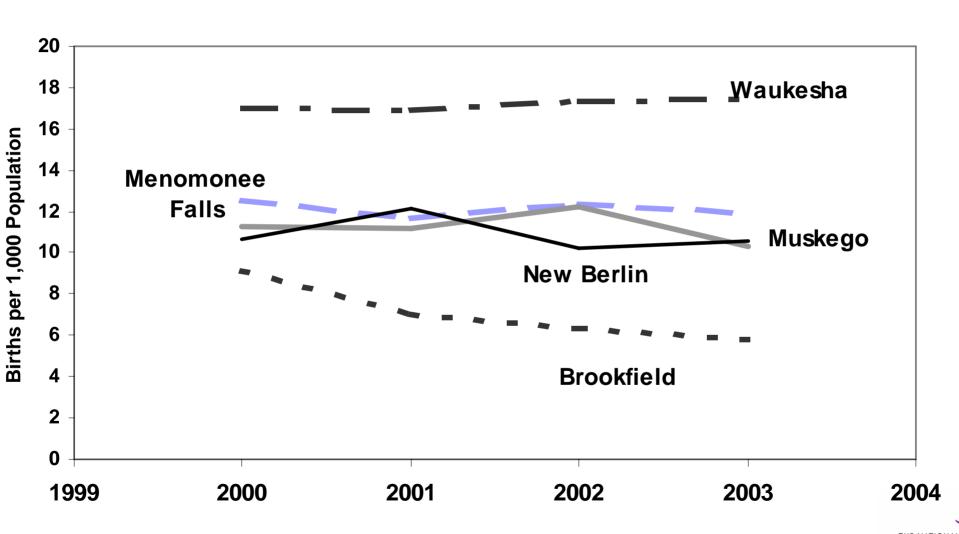




Photo taken by co-principal investigator.



Crude Birth Rate for Larger Civil Divisions in Waukesha County 2000-2003



Hospitals with >5% of Deliveries to Waukesha County Residents by County and City

| County | City | Hospital | Births | % of All Births |
|-----------|-----------------|------------------------|--------|--------------------|
| Waukesha | Brookfield | Elmbrook | 432 | 10% |
| | Menomonee Falls | Community Memorial | 319 | 7% |
| | Oconomowoc | Oconomowoc Memorial | 393 | 9% |
| | Waukesha | Waukesha Memorial | 1,831 | 42% |
| Milwaukee | Milwaukee | St Joseph | 525 | 12% |
| | West Allis | West Allis Memorial | 375 | 9% |
| Totals | | | 3,875 | 89% |



NCS-Waukesha Vanguard Center Collaborators Key Partners-Roles and Areas of Expertise

- University of Wisconsin-Madison
 - Neurodevelopment, Asthma, Injury
 - Environmental Health, Epidemiology
 - Demography/Population Sciences
 - Longitudinal Studies
 - Genetics
- Medical College of Wisconsin/Children's Research Institute
 - Community based participatory research
 - Medical Community Engagement
 - Environmental Health
 - Gene-Environment Interaction
- Marquette University Colleges of Nursing and Communication
 - Biometry/Data Collection, Perinatal Data
 - Hospital-based Data Collection
 - Risk Perception
 - Outreach

- National Opinion Research Center
 - Field Operations
 - Recruitment & Retention
 - Sampling/Segment Selection
- Children's Service Society of Wisconsin
 - Recruitment & Retention
 - Interviewing
 - Community Connection
- University of Wisconsin-Milwaukee
 - Environmental Health, Built Environment
 - Psychosocial Development
 - Community Outreach & Education
- Wisconsin Department of Health & Family Services
 - Environmental Health
 - Vital Records
 - Maternal and Child Health



NCS-Waukesha Vanguard Center Collaborators Other Partners (Established or Initiated)

Hospitals & Health Systems

- ProHealth Care
- Covenant Health Care
- Froedtert & Community Memorial
- Aurora Health Care
- Waukesha Family Practice Center

Waukesha County

- Executive Offices
- County Board of Supervisors
- Department of Health & Social Services

State Legislators

City Government

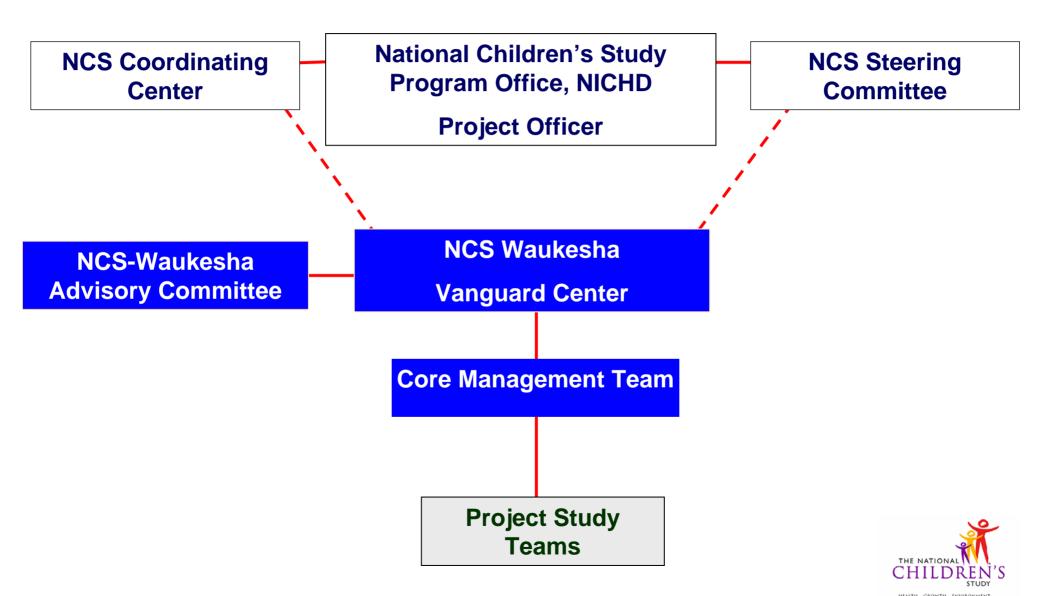
- Waukesha
- New Berlin
- Merton
- Pewaukee

Other Community Agencies/Institutions

- Casa de Esperanza
- Wisconsin Association for Perinatal Care
- University of Wisconsin Extension
- St. Joseph's Clinic
- March of Dimes
- Waukesha Women's Center
- Catholic Charities
- Waukesha County Technical College
- University of Wisconsin-Waukesha
- Addiction Resource Council



NCS-Waukesha Vanguard Center Organizational Structure



Study Teams

Phase I

- Community Outreach & Collaboration
- Protocol Development
- Sampling & Characterization
- ▶ Testing & Research

Phase II

- Community Outreach & Collaboration
- Recruitment & Enrollment
- Data Collection & Handling
- Quality Assurance & Control
- Analysis, Reports, Deliverables



NCS Waukesha Field Operations

